

Running Head. DEVELOPING A COMMUNITY RISK REDUCTION PROGRAM

LEADING COMMUNITY RISK REDUCTION

Developing a Community Risk Reduction Program.

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Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed.....

Abstract

As early as 1973, the national commission on fire prevention and control's report, *America's Burning* and more recent publications such as *Solutions 2000*, outlined the importance of developing community risk reduction programs. The purpose of this research's is to identify the criteria for a fire and life safety community risk reduction program for the New Britain Fire Department.

The research procedures included literature reviews, internet research and survey questionnaires of senior citizen groups, local fire departments and other agencies. The results highlighted community risks within New Britain and identified guidelines for developing a community risk reduction criterion. Recommendations included the adoption of new policies to reduce identified risk within the New Britain community.

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Developing a community risk reduction program.

Since the publication of *America's Burning* in 1973 (National Commission on Fire Prevention and Control, 1973), the community risk reduction process has steadily evolved to the point where it has increased the awareness of many safety managers and encouraged their participation in the creation of a community risk reduction culture. The National Fire Academy (NFA, 2003) outlined its support of this process within its *Leading Community Risk Reduction course* (June, 2003). The NFA (2003), also states that in spite of an increasing number of community risk reduction publications, more stringent fire code enforcement procedures and technological advances in fire suppression and detection, approximately 4,000 fire fatalities and 18,000 fire related injuries had occurred on an annual basis across the United States (p. SM 0-19). These results have kept the number of fire deaths and injuries in America at one of the highest levels seen within the developed world.

The problem is that the New Britain Fire Department (NBFD) does not have a community risk reduction program to reduce fire and life safety risks within the city. The purpose of this research is to develop the criteria for a fire and life safety community risk reduction program for the NBFD. This applied research project (ARP) will utilize action research to answer the following research questions.

1. What is the community risk reduction criteria at the national level?
2. What is the community risk reduction criteria for the state of Connecticut?
3. What is the community risk reduction criteria for similarly sized fire departments?
4. What is the community risk reduction criterion for the NBFD?

Background and Significance

City of New Britain

During the early part of the 20th century, New Britain was known as the hardware capital of the world. Major manufacturers, such as the global hardware tool- manufacturer Stanley and Corbin Locks, were headquartered in the city. (New Britain Profile, 2006). The latter part of the twentieth

century has seen virtually all of the city's manufacturing companies close down operations which contributed to a significant reduction in the city's tax base. New Britain is now one of the most economically challenged cities in Connecticut. It has the third highest mill rate from the 169 towns and cities within the state (Connecticut Department of Economic and Community Development Census Information, 2000). New Britain is one of the most culturally diverse cities in Connecticut. Within its 72,000-person population, approximately thirty languages are spoken. Almost 20 percent of residents are aged 65 years and over with 36 percent being less than 24 years old. This indicates that a large percentage of young people and senior citizens reside there. With just over 20 percent of the city's population considered to be special need residents, serves to underline the importance of this research to develop a community risk reduction criterion. (Solutions 2000, 1999 p.1).

New Britain Fire Department

The NBFD was created by the state general assembly in May 1833. The department was established as a municipal corporation to carry out firefighting activities. It is a full time career fire department employing approximately 150 firefighters. The city is contractually obligated to provide a minimum of four firefighters for each shift to work on eight of the department's nine fire companies. The NBFD provides emergency fire response, and emergency medical services (EMS) duties as medical response technicians (MRT) first responders. The fire marshal's office is responsible for fire code enforcement (NBFD, 2006a). Service operations are funded from an annual operating budget of approximately \$11 million. Ninety-seven percent of the budget is attributed to personnel salaries (NBFD, 2006b).

Community Risk Reduction Activities

Over the years, the NBFD has conducted community fire safety activities, which included the use of a robot dog called Sparky to help educate young children. Although these activities were not part of a community risk reduction strategy within the NBFD, firefighters would conduct visits to local schools and occasionally use the department's fire safety trailer to support fire safety programs.

The fact that this research will help to develop the NBFD community risk reduction criterion, directly supports the NFA's (2003) objectives which outlines the need for executive fire officers (EFO's) to implement and lead community risk reduction initiatives within the community. This research is also linked to several United States Fire Administration's (USFA, 2002), five-year operational objectives. More specifically, USFA objectives to:

Promote within the community a comprehensive, multi-hazard risk reduction plan led by the fire service organization. Reduce by 25 percent the loss of life within the group aged 14 years and below and those aged 65 years old and above, also for the NBFD to respond appropriately in a timely manner to emerging issues. The relationship of the problem and its relevance to the NFA and USFA's operational objectives and guidelines establishes an appropriate framework to begin the community risk reduction process (USFA, 2006 d).

Literature Review

According to NFA (2003), "an effective community risk reduction program is one that integrates emergency response, fire code enforcement, fire and life safety education, public information and risk related economic incentives". This process is deemed critical in identifying risks, reducing fire deaths, injuries and property losses within the community. (p.SM, 0-15, 0-17).

The literature review for this ARP began at the NFA's learning resource centre (LRC). LRC staff helped to locate articles and publications on the community risk reduction process. The literature review included the NBFD's *Operating policies and guidelines*, from the year 1994 to 2004. Internet research on community risk reduction methods, socio economics and demographic information also formed part of the literature review process.

One of the research questions sought to determine what was the community risk reduction criterion at the national level. The review showed that the overarching strategy for a national community risk reduction criterion, had been outlined within the United States Fire Administration's mission statement which articulated the agency's commitment to "develop the ability to prevent, mitigate, prepare for, and respond to community risks so that the implementation of community risks

reduction processes, reduced injuries, deaths and damage nationally. (USFA, 2006 a).

Publications from other agencies such as the Centre for Disease Control (CDC, 1998) *National vital statistics system*, the NFA (2003) and key publications such as *Solutions 2000*, (1999, p. 9-15), and *Advocating Shared Responsibilities for Improved Fire Protection, Beyond Solutions 2000*, (FEMA, 2002 a), all outlined similar fire and life safety risk reduction priorities and a commitment to public safety. The review identified a commonality between all of the above agencies in classifying high *risks or at risk groups* within the community. *High risk / at risk* groups were shown as groups having a greater likelihood to suffer fire related deaths and injuries in the community. The high risk / at risk groups contained three main life risk categories, which included children under the age of five, senior citizens aged over sixty-five, and people with disabilities/special needs FEMA (2002 a; 2006). Children under age 5 were 40 percent more likely to die in a fire than other people within the general population. The review showed that African American and native Indian children were twice as likely to die in a fire compared to white or asian children. Children under age 5 also had the highest number of fire related injuries. Although the percentage of injuries in children declined between ages 6 to 9, a strong increase between the ages of 10 and 14 year old group was also shown. (USFA, 2004).

According to USFA (1999) publication, *Fire Risk for Older Adults*, senior citizens aged 65 years and over, in addition to posing one of the highest life fire risks, was one the fastest growing segments of the population. Senior citizens were more susceptible to becoming victims of fire and fire related injuries given their diminished physical abilities and or mental limitations. The review showed that fire related deaths and injuries were three times the national average for persons aged seventy-five and four times for those aged 85 years and above.

The CDC's (1998) *Morbidity and Mortality Weekly Report* and USFA (2006) also pointed out that many disabled and special needs members within the community also faced similar exposures to fire and fire related injuries. FEMA (2006) emphasized the importance of planning for and identifying *special needs* population within communities given the increased risk of death or

injury from fire for people with physical, mental or sensory disabilities.

As part of the national community risk reduction strategy, FEMA's definition of special needs groups includes persons with special dietary needs, those without vehicles, including non-english speaking groups and single working parents. This broad categorization aligns with the principles of an all hazard risk reduction process (FEMA, 2006).

A review of information obtained from several agencies located within the city showed that they were approximately 17,000 residents within the community, which met the special needs criteria (Special Needs Assistance Program, 2005). In responding to emergency incidents, the NBFD deals with over 4000 incidents annually (NBFD, 2003, 2004, 2005). According to the FEMA (2004), there were approximately 1.6 million fires reported within the United States during year 2005, with property losses from fires estimated at \$10.7 billion. Tragically, this period also recorded 3,675 fire deaths and approximately 18,000 people obtaining injuries. According to (USFA, 2006 c), 83 percent of all civilian fire deaths occurred within residential premises. Overall, the review also showed that African Americans and Native Americans suffered higher incidents of fire deaths and injuries in relation to other races (USFA 2001, 2004, p.11), (FEMA, 2004).

Although African-Americans represented 13 percent of the general population, this group accounted for 26 percent of all fire deaths, notwithstanding the added life risks facing people with disabilities, senior citizens. African-American senior citizens had a fire death rate, which was more than ten times the national average.

The literature review outlined the guidelines for developing a community risk reduction program. FEMA's publication, *Public Fire Education Planning--A Five Step Process* (FEMA, 2002) states that "one of the first steps of the community risk reduction process was for departments to conduct a community risk analysis to identify the community risk profile, risk priorities, target area and population information"(p. iii). It also outlined the importance of applying hazard and vulnerability assessments to determine hazard probability and vulnerability impacts in terms of (a) danger, destruction and personal harm. (b) economic implications. (c) environmental impacts. (d) social

impacts and (e) political considerations. (NFA 2003, p. 2-5 – 2-23). The importance of developing community partnerships within this process was also emphasized. FEMA (2002) states that "the most effective risk reduction efforts were those which included the community within the planning and solution process" (p. iii), prior to the creation of an intervention strategy. By establishing an intervention strategy after reviewing risks and other information, allowed intervention approaches and resources requirements to be defined more accurately, in addition to supporting program trials and evaluation methods.

Community education and literacy levels were shown as having some influence on community risk reduction outcomes. NFA (2003) explains how cognitive and education levels can be risk factors for people within a community. FEMA (1997) explanation, that people with little education were less likely to grasp the full importance of public fire safety education messages as early as they could, highlighted the importance of literacy and education in respect to the NBFD community risk reduction criterion. The review showed that 31 percent of New Britain residents aged over 25 years did not have high school diplomas, which was almost double the 16 percent state average for this age group. The twenty-two percent of city's residents having an associates degree or higher, also fell below the state average of 38 percent. Although the number of people having some college education was on par with the state average, the cumulative student dropout rate of 28.6 percent dwarfed the 10.8 percent state student dropout average. (Capital Workforce Partners, 2006).

With 56 percent of the city's population aged 16 years stated as functioning at national literacy Levels one and two, highlighted an important correlation to the NBFD community risk reduction process. According to Capital Workforce Partners (2006), Individuals classified at level one or two were likely to encounter difficulties in performing tasks such as reading the screen on an automatic teller machine (ATM), deciphering a bus schedule, reading newspapers, dosage instructions on a medicine bottle or completing job applications. According to the Literacy Volunteers of Central Connecticut Inc (2006), the reading, writing, and /or english speaking skills of approximately 16,000

New Britain adults were at the lowest literacy level. Although information from the National Institute for Literacy, showed that New Britain literacy levels were consistent with national literacy trends, the review identified the importance of this issue on the community risk reduction process. Another key aspect highlighted within the review was the effect of socio economics. NFA (2003) points out that for the community risk reduction process to improve community vitality and reduce risk, socio-economics must be considered, since poverty is itself a risk factor which has been shown to pose significant risk to specific populations.

Gunter (1981) argued that the number of fires differed significantly when the income of various groups were considered. The difference in the frequency in fires varied as much as 850 percent between the lowest and highest median income groups (p. 56). The review also highlighted that socio economics had a relationship to changes in social policies which affects the risk reduction process. According to (Lav and Carey, 2003), the gap between the between the well off and poor people in the United States had become wider than within any other advanced country. They argued that the number of cutbacks in national and local support programs for low-income households had increased dramatically. One of the results was the reduction in the rent-paying capability of low-income households.

FEMA (1997) supported the presumption of increased fire risk in its articulation of the fire risk relationship to this socio economic challenge. FEMA states that poverty and poor quality housing posed a higher risk of fire within rented premises. Shelter poverty was seen to affect a household's fire risk if its occupants could not afford to make essential payments such as utility bills and begin to use alternatives methods for heating and cooking. Stone (1993) points out that in situations where household utilities are disconnected, people have a tendency to compensate with other, less fire-safe devices such as electrical space heaters in the absence of gas supplies for heating, while focusing on issues such as food, clothing, and household necessities. The review also showed that in many socio economically challenged environments, the acquisition of and maintenance of smoke detectors in many cases became a low priority item. The city of New Britain has the third highest mill rate

within Connecticut. The median income of its residents is 65 percent below the state average earnings. Unsurprisingly, multi family properties accounted for almost 50 percent of its housing stock and rental properties. (Department of Economic and Community Development, 2006).

The review also showed a correlation between the number of fires and injuries in communities and groups with the lowest median incomes, and for people living in socio economically challenging conditions (FEMA, 1997). It was also shown that across the United States numbers of vacant and abandoned buildings were more prevalent in poorer neighborhoods and were more likely to be involved in arson related fires, as well as having cases of fire deaths and injuries. (FEMA, 1997). The increase in the number of vacant and abandoned premises within New Britain, may according to according to (Ahrens, 2001) and the NFA (2003) create fire life risks within a community, in addition to having a significant impact on socio economics and fires within a community.

The USFA and the International Association of Arson Investigators (USFA / IAAI, 2006), emphasized the risks posed by abandoned buildings within a community, more so, the prominence of abandoned buildings being an indication of neighborhood decline and a threat to the stability of neighborhoods. FEMA (1997) states that "the increase of vacant and abandoned buildings could begin undermine the value of investments and quality of property maintenance services by building owners. This in turn could increase the risk of fire from inadequately maintained heating, electrical systems and buildings" (p.11-12). The abandonment and decline of property could also be considered to be a contagious phenomenon, fire was intertwined with abandonment as both a cause and an undesired side effect. (p.7). Within the department's jurisdiction of 13.3 square miles, there were 1623 three family, 160 four family, 295 five family and 282 six family houses. There are also 225 six family apartment buildings and 293 buildings with combined business and residential use. The majority of the multifamily buildings require an annual fire code inspection in addition to those stipulated for commercial and industrial premises. The review identified that the fire marshal's office

conducts approximately 10 percent of mandated fire code inspections annually. (NBFD *Office of the Fire Marshall report*, November 2004.)

The effects of socio economics, was also shown to affect other societal issues. FEMA (1997) pointed out that within socio economic challenged areas, increased crime rates caused more people to employ additional security measures to prevent forced access into their homes. The installation of metal grilles on windows and doors, the blocking of doors and passageways with furniture, prevented many people from escaping fire situations causing a higher number of fire-related injuries and deaths. (p.11,12).

Another key socio economic issue highlighted by (FEMA, 2002), is the level of smoke detector ownership across the United States. FEMA (2002) explained that smoke detector ownership was found to be lowest within low-income neighborhoods. Households without operational smoke detectors were two and a half times more likely to have reported fires than those with operational smoke detectors. Gunther (1981) also showed that fires started by children playing with matches occurred more frequently within poorer neighborhoods. In addition to this, the literature research also showed that children in socio economically challenged areas were left unattended more often than children living in rural or suburban areas. Many parents living in these situations felt that they had no other choice but to leave their children alone in order to work (Kraizer, S, Witte, S, Fryer, G.E. & Miyoshi, T, 1990). The issue to enhance smoke detector ownership within the community was also one of FEMA's (1997) objectives to increase the numbers of smoke detectors particularly within lower income neighborhoods.

The fact that smoke detectors were able to save lives, in spite of failing to operate in 21 percent of fires, is a clear illustration on the benefit of these devices. Given that smoke alarms were not present in 57 percent of multiple-fatality fires, USFA (2002) emphasized the importance of this issue within the community risk reduction process. USFA (2004) indicates that fire deaths and injuries in Connecticut were below the national average. The state is ranked 19th in the nation

for fire deaths and injuries. The responsibility of the community risk reduction criterion for Connecticut lay in the hands of the state fire marshal (OSFM) and the commission for fire prevention and control via the Connecticut fire academy (CFA). The mission statement for both agencies emphasizes their commitment to the community risk reduction process. The OSFM stated its responsibility to “promulgate and enforce fire codes, standards and regulations and to reduce the harm associated with fires, explosions and mechanical failures” in accordance with Connecticut general statutes (OSFM, 2006).

The Connecticut Fire Academy detailed its mission as one to “prevent or mitigate the effects of fire and disasters, either natural or manmade, on the citizens of the state of Connecticut and that its objectives will be accomplished through the development and delivery of state-of-the-art educational programs designed to meet nationally recognized standards by certifying individuals to those standards and maintaining up-to-date resources for use by fire service personnel, public educators and other first responders” (CFA, 2006). The CFA’s community risk reduction activities included initiatives for senior citizens also juvenile fire setting, and fire safety education and programs for young children and the public. The review process also evaluated information on the state’s community risk reduction process by means of a survey questionnaire. A similar survey method was utilized to review the community risk reduction criteria for similarly sized fire departments in Connecticut in order to answer some of the research questions. In examining the department’s current risk reduction activities, the review showed that its mission statement outlined its intention to, “keep property loss at an absolute minimum, to keep our firefighters injury free, and to have no civilian fire casualties be there injuries or deaths, protect all from our nations worst enemy- rampant fire.”

For the past three years, cooking activities were the leading cause of fires in New Britain (NBFD *NFIRS report*, 2003, 2004,2005). Cooking activities was also the leading cause of fires nationally (USFA, 2005 a). Over 80 percent of cooking fires occurred within single or in multifamily buildings, while smoking and arson related fires was the leading cause of fire deaths (FEMA, 2004).

Literature Review Summary

The literature review identified a number of complex challenges at the national, regional and local level pertaining to the community risks reduction process. It showed that senior citizens, special needs groups, certain ethnic groups and young people posed a high level of risk from fire injuries and death within the community. The risk potential between fires and socio economic challenges within community was also highlighted. The literature review outlined key approaches to develop a community risk reduction criteria, also how the absence of community risk reduction activities affects the safety of residents and a community's economic viability. The findings of this review makes this an appropriate starting point to proceed with this ARP.

Procedures

The procedures used within this ARP is based on action research methods to develop a community risk reduction criteria for the NBFD. This process began at NFA's Learning Resource Centre (LRC) where LRC staff helped to identify articles and research papers on the community risk reduction process. Internet research examining the areas of community risk reduction, community risk mitigation, risk mitigation and fire safety risk reduction was also carried out as part of the procedures. FEMA (2002 a) outlined a comprehensive approach for developing a community risk reduction program, which emphasized the necessity for undertaking a community risk analysis as a first step within the process. This analysis included the review of NBFD policies, standard operating procedures, incident call information and city records. Internet research on socio economics, demographics, fire safety information and statistics was also carried out. This information was then collated into the NFA's hazard and vulnerability assessment template. Copy shown in (Appendix I) in order to determine hazard probability and vulnerability impacts to the community in terms of the danger and destruction, personal harm to people also economic, environmental and social impacts to the community (NFA, 2003). According to FEMA (2002 a) the community analysis strategy expanded into two distinct areas. First, there are the people i.e. target audience, their characteristics and relationship to the identified problem.

Second, the problem itself in terms of its nature, cause, those affected and the solution.

A number of at high-risk groups were identified by USFA (1999). Senior citizens which form one of these groups shows evidence of increasing steadily across the country for the foreseeable future (USFA,1999), This emphasizes the increased challenges this group is likely to present for community risk reduction initiatives in the future. As part of the information gathering process and to define senior citizen characteristics and relationship to the identified problem, a community meeting group was established to support the planning actions. A number of agencies were asked to participate within the group, these being the New Britain Hospital for Special Care, New Britain General Hospital, American Red Cross, Visiting Nurses Association, New Britain Tax department, New Britain Water Department, New Britain Emergency Medical Services, New Britain Board of Education, New Britain senior Centre, and the New Britain Commission for Persons with Disabilities. The makeup of these organizations and their level of community interaction enabled a very broad outreach base and covered all aspects of special needs and senior citizen information sharing sources within New Britain. For the purposes of this research, the term *special needs* population refers to persons with visual, hearing or mobility impairments, including people with mental retardation, dementia and with medical conditions. The procedures for this research included the distribution of a senior citizen survey questionnaire to answer research question 4. This survey was distributed via the agencies, which were participating within the community meeting group, which was gathering information to help define senior citizen characteristics and relationship to fire safety related problems they may be facing in the community.

The main reason for using a survey questionnaire for this method of information gathering lay in its ability to help evaluate the perception of fire and life safety risk as seen by people in the community and how perceived risks were rated (Smerz, 2003), and define the senior citizen relationship to the identified problem. Robson (2002) argues that, "in order to determine the

success of survey questionnaires, a trial run should be conducted to refine the effectiveness of the question set, presentation or ambiguities which may exist" (p.185). To do so, a trial questionnaire was distributed to a small group of respondents from senior citizen agencies. Prior to distribution, contact was made with support group workers where the reason for and scope of the questionnaire was explained. According to Robson (1993), this would most likely promote openness and dialogue within the questionnaire process. Ten questionnaires were distributed within the trial run. A 100 percent response rate was achieved. The results of the trial run identified issues with the questionnaire formatting, font size and use of specific colors to support the legibility and understanding of the survey form for respondents. These issues were corrected. Following the trial run, the senior citizen questionnaire was distributed during August 2006. The requested completion date was the end of September 2006. The survey questionnaire sampling field was selected through the partnership group, given its broad interaction with senior citizens within the community.

This arrangement enabled the questionnaire survey to be distributed to a wide cross section of senior citizens in the community. From the 100 questionnaires distributed, 83 were returned, giving a response rate of 83 percent. The rationale for asking the questions shown within the senior citizen survey questionnaire and risk list in (Appendix A), was to determine how the risks shown within the supplied risk list were perceived, also to establish any other concerns, not specified in the supplied risk list also to determine the respondent's baseline knowledge of fire and life safety community risks, the perceived need and frequency of information received by the respondents and to determine the issues of interest to respondents and their perceived needs for fire safety and injury prevention. The survey also sought to identify the venue and delivery method preferred by respondents. The procedures also used three other survey questionnaires to help answer the remaining research questions. To facilitate this process, cover letters were sent to all survey questionnaire participants, which explained the intent and purpose of the survey process and the relationship this research had to completing this ARP as part of the EFO program. Cover

letters are shown in (Appendix D).

Research question 2 asked what is the community risk reduction criterion for the state of Connecticut? Two survey questionnaires were distributed to state agencies in order to answer this research question. The survey questionnaires were sent to the state agencies primarily responsible for the fire and life safety community risk reduction criteria for Connecticut. These being the OSFM (Appendix B) and the Commission on Fire Prevention and Control (Appendix C). Questionnaires were distributed during the month of September 2006, with a requested return date of October 30th 2006. A fifty percent response rate was achieved for the two questionnaires. The questionnaire used within this survey for the OSFM (Appendix B) asked the following questions:-

(a) What community risk reduction initiatives were being used or planned. (b) What were the objectives for community risk reduction initiatives in force or planned. (c) What type of support was envisaged for planned programs also if they were any successful, community risk reduction initiatives implemented during the past three years?

Research question 3 asked what is the community risk reduction criterion for similarly sized fire departments. This criterion enabled most fire departments with similar demographic and housing profiles in Connecticut to be included within the survey sample. Information from the *National Directory of Fire Chiefs and EMS Administrators*, (2006, 15th Edition) was used to identify similarly sized fire departments. A total of twenty-five survey questionnaires were distributed during September 2006, with a requested return date of October 24th 2006. Eighteen questionnaires were returned giving a 75 percent response rate.

The survey questionnaire sent to similar sized fire departments (Appendix C) asked about (a) the type of community risk reduction programs in place, (b) the reasons for and benefits for community risk reduction programs in use, (c) key challenges and drawbacks with current community risk reduction programs and (d) program achievements.

Research question 4 was focused on determining a community risk reduction criterion for

the Nbfd, in doing so, the procedures examined fire and life safety community risk reduction issues within a national, regional and local context, which included the literature review and information pertaining to research questions 1, 2 and 3.

The procedures included an examination of the *Nbfd National Fire Incident Reporting System* (Nbfd, 2003,2004,2005) data, the *Office of the Fire Marshal reports* (2004, 2005) also information on socio economics, housing, education, special needs and demographics. This information was then placed within the NFA's template for community hazard identification and vulnerability assessments (USFA 1999,p.3-11). (NFA, 2003, p. 2-5, 2-15). From this information the process of identifying priorities, intervention strategies, and resources to develop a community risk reduction criteria for the Nbfd was carried out. This process helped to develop the actual recommendations stated within this research.

Limitations and Assumptions

A key limitation within this research relates to the community risk analysis process. Although the community risk analysis process is designed to analyze community risks in its entirety, therefore by not using an all hazards approach, the research cannot evaluate the different community risk interrelationships, which exist as part of an all hazards approach. To do so effectively the research would need to analyze and determine the expectations of all community groups, (FEMA, 2002, p. 1-3) which has relevance to the community risk reduction process. Another limitation is the time and resources pertaining to this research, given the scope of the subject matter.

FEMA (2004) highlighted the need for further research into specific areas of community risk reduction such as the reasons behind the large number of fatalities in residential fires where smoke alarms were installed and had operated. (p.11). Although the actual efficiency of smoke detectors has been proven, there maybe underlying factors or behaviors within the community which warrants further research into this particular outcome.

Another limitation is the use of some closed end style of questions within the survey

questionnaires. Dervin and Dewdney (1986) explained that although closed ended questions required less time and effort from interview participants when compared to open ended questions. Open ended questions allowed for unrestrained or free responses. Closed ended questions being answered by either a “yes” or “no, ” could be restrictive and have been shown to discourage disclosure. (p. 509).

The utilization of semi-structured interviews for information gathering, could provide a higher quality and level of information. Robson (2002) explained how semi structured interviews allows the modification of questions based upon the perception on what seems most appropriate in the context of a conversation thereby enabling a fuller discussion of a participant’s interpretation or for that participant to assert their ideal position, which generally helps to reveal how the individual sees that particular idea. (p. 239 -249).

Because this is a useful tool particularly when attempting to understand cultural differences within various community groups is also a further limitation of this research given its potential importance to the community risk reduction process.

Definition of Terms

Mill rate / Tax mill rate: A mill is equal to \$1.00 of tax for each \$1,000 of assessment. To calculate property tax, the assessment of the property is multiplied by the mill rate and divided by 1,000. A property with an assessed value of \$50,000 located in a municipality with a mill rate of 40 mills would have a property tax bill of \$2,000 per year. A lower mill rate would translate as a lower tax bill for that particular premises (Department of Economic and Community Development, 2006).

SOP: A Standard Operating Procedure (SOP) is a set of written instructions that document a routine or repetitive activity followed by an organization (Environmental Protection Agency, March 2001, p.1)

Socio Economic: or Socio economics is the study of the relationship between economic activity and social life. This word is also represented as socioeconomics. (Wikipedia, the free encyclopedia, 2006).

Similarly sized fire department for the purposes of this research is considered to be any career fire department serving communities with no less than 22 percent and no more than 75 percent of New Britain's 72,000 population.

Results

Research Question 1. The research asked what is the community risk reduction criterion at the national level.

The research showed that the national community risk reduction criteria is an all inclusive hazard reduction and mitigation strategy designed to reduce risks within any given community. The USFA (2004) mission statement outlines the organization's commitment to *"develop and manage programs that increase capacity of the nation's fire and emergency services and the public to prevent, mitigate, prepare for, and respond to local, regional and national emergencies"* (USFA, 2006 a) which emphasizes its all hazards approach to community risk reduction. FEMA (2002 a) also outlines that one of the most effective risk reduction efforts are those, which involve the community in the planning process.

This research outlined a number of examples pertaining to the fire and life safety community risk reduction process, and the efforts enacted by other agencies such as the (CDC,1998) (NFA,2003) and (FEMA,1997), all outlining a shared understanding and prioritization of fire and life safety community risks. This understanding included a collective definition of the level of risks and the groups considered to face the highest risk from fire deaths and injuries. Senior citizens, disabled persons including those considered as having special needs, young children, African Americans, other ethnic groups and persons deemed to be socio- economically challenged had shaped the national fire and life safety community risk reduction criteria. The research showed that the strategic approach used to reduce community risk used a combination of fire education, fire engineering and fire intervention strategies as part of a national community risk reduction criteria.

Research Question 2. This research question sought to determine the community risk reduction criterion for the state of Connecticut.

The office of the state fire marshal and the commission on fire prevention and control has primary responsibility for statewide community risk reduction. The state fire marshal's office is responsible for promulgating and enforcing fire codes and regulations to reduce the level of harm associated with fires, explosions, and mechanical failures in accordance with Connecticut's general statutes. The commission on fire prevention and control stated that its mission is to "prevent or mitigate the effects of fire and disasters, either natural or manmade, on the citizens of the state of Connecticut. To determine the community risk reduction criteria for Connecticut, a survey questionnaire was sent to each agency.

Results for the Office of the State Fire Marshal's survey.

The survey questionnaire (Appendix B) response indicated that the *state fire marshal's* community risk reduction initiatives involved continuation training for the state's fire marshals and fires inspectors. The survey identified a number of community risk reduction activities and programs being supported by the agency. These included the hosting of a radio station phone in talk show to help raise awareness on fire code issues, facilitating seminars to educate and update homebuilders, trade associations and sprinkler installation companies on current fire code regulations and guidelines also analysis of NFIRS data from fire departments within the state with particular emphasis on identifying fire code deficiencies and underlying causes for fire behaviors or specific correlations to reduce community risks.

Results for the Commission of Fire Prevention and Control survey.

The results of the survey questionnaire (Appendix C) indicated that this agency's actions to reduce community risk involved the development and delivery of fire related educational programs designed to meet nationally recognized standards by supporting the certification of

individuals and maintenance of resources for use by fire service personnel, public educators and other first responders. This agency by way of the Connecticut Fire Academy (CFA) has established a number of fire and life safety community risk reduction programs which included fire and injury guidance for senior citizens, juvenile fire setting prevention, fire safety education, advice for the public and risk reduction activities for young children. The results showed that the community risk reduction criteria for the state of Connecticut consisted of a number of safety initiatives, designed to address high risk groups within the community. The criteria also included actions designed to influence fire engineering, education and enforcement, which aligns with the national fire and life safety risk reduction strategy. The survey questionnaire forwarded to this agency was not returned to enable its evaluation as part of this research.

Research Question 3 looked into the community risk reduction criterion for similarly sized fire departments. Survey questionnaires were distributed to a number of similarly sized fire departments in order to answer this research question.

Similarly sized fire departments survey questionnaire results.

The survey (Appendix B) asked whether these fire departments had community risk reduction strategies in place. The results indicated that although 74 percent of respondent departments did not have a community risk reduction strategy in place, approximately 75 percent of all respondents were carrying out community risk reduction programs. While 93 percent of these programs focused on fire education initiatives to reduce community risk, only 6 percent of respondent department's community risk reduction activities focused on fire code enforcement initiatives with fire engineering accounting for only 1 percent of the total activities. Several departments indicated that their fire engineering activities were related to the National Fire Protection Association's initiatives aimed at promoting the use of sprinklers within residential premises (NFPA, 2003).

The research also showed that 4 percent of respondent departments had considered the implications of addressing community diversity within their risk reduction initiatives. Although many respondents indicated that, the issue of diversity was being considered for future programs, 60 percent of departments reported resource problems in being able to support their community risk reduction programs. Although some federal grants dollars were obtained, these funds were deemed insufficient to support programs in the longer term. The research highlighted that only three respondent fire departments had a larger percentage of diversity within their communities' demographic profiles when compared to New Britain. The predominant premises types within the jurisdictions of respondent fire departments were mainly single-family residential properties with some industry. Ten percent of respondent fire departments had multi family housing stocks, which represented significant life risks within their community. The research established that approximately 3 percent of respondent fire departments had similar concentrations of multifamily homes as New Britain. Details for survey questions 1, 2 and 3 is shown in Table 1.

Table 1 Data provided from similarly sized fire departments survey questionnaire.

Table 1

Survey results for similarly sized fire departments

<i>Survey Questions</i>	Yes	No	
1. Does your Fire department have a Community Risk Reduction Strategy?	25%	75%	
	Education	Engineering	Enforcement
2. Community risk reduction programs currently in place.	85%	5%	10%
3. Please indicate the focus area for community risk reduction programs currently being used?	93%	1%	6%

Research Question 4. Sought to establish the community risk reduction criterion for the New Britain Fire Department. The results showed that within the city of New Britain, approximately 20 percent of its population were over 65 years while 36 percent being was less than 24 years old, approximately 23 percent of that total being younger than 17 years old. This showed that the city had a large number of senior citizens and young people. There were also approximately 17,000 residents classified as having special needs within the community.

The research indicated that New Britain was one of the most economically challenged cities within the Connecticut with the third highest tax rate from a total of 169 cities and towns within the state. The median income of its residents was 65 percent of the state average. (Department of Economic and Community Development (2006). According to the Connecticut Department of Economic and Community Development Census (2000), the city's racial composition of 64 percent white, 10 percent African-American, 24 percent Hispanic and 2 percent Asian / Pacific Islanders, made it one of the most diverse cities within the state. The research showed that African Americans and Native Americans has historically suffered higher incidents of fire deaths and injuries in relation to other races.(USFA , 2004,.p.11), (CDC, 1995). The fact that African Americans represented thirteen percent of the general population, and accounted for twenty six percent of fire deaths (FEMA, 2004) showed that this issue would be an important matter to consider within the community risk reduction criteria for the NBFD.

The research pointed out that cognitive and education levels could affect safety behaviors within specific community groups. (NFA, 2003, p. SM 0-12) People with little education were considered less likely to "grasp the full importance of public fire safety education messages as early as they should (FEMA 1997, p.25). The research highlighted that the number of residents aged over 25 years old, including those with associate degrees and higher, fell below the state average. More significantly however was the school dropout rate at 28.6 percent being more than twice the state average of 10.8 percent. This illustrated the impact education could have on the community risk reduction process. Information from (Capital Workforce Partners, 2006) showed that 56 percent of the city's population were considered to function at literacy levels one and two within the national literacy scales. Individuals functioning at levels one or two of the national literacy scale could encounter difficulties in performing tasks such as reading a newspaper or fill out a job application properly highlights likely challenges within the community risk reduction criteria process for the NBFD (Literacy Volunteers of Central CT Inc, 2006).

The research showed that the city's housing stock, consisted of a large number multi family premises many of which were rental property. These high occupancy premises represented almost 50 percent of homes. Information from the city's municipal development showed an increasing number of abandoned buildings within the city. In terms of fire code premises inspections, the department's fire inspectors carried out approximately 10 percent of its annual premises fire code inspection requirement. The research showed that the percentage of smoke detector ownership was normally lowest within the low-income neighborhoods and that households without operational smoke detectors were two and a half times more likely to have reported fires than those with operational smoke detectors (FEMA, 2002 b , p.16-17). The occurrence of fires caused by children playing with matches being greater within the poorer neighborhoods. (Gunter, 1981) also shows that the city's socio economic challenges, educational and literacy issues, are important parts of its community risk reduction process.

Senior Citizen Survey results.

The senior citizen survey questionnaire (Appendix C) asked a number of questions in order to highlight the needs and perception pertaining to community fire safety. One of the questions listed in the survey asked respondents to select from the supplied hazards identification list, the issues which concerned them the most. The greatest concern pertained to kitchen and house fires, which accounted for 29 percent of responses. Trips and falls followed next with just over 10 percent of the responses. Other concerns, which had not been included within the supplied hazard list included the improper use of fire exits and fire doors being stuck in the open position. Some respondents also mentioned a fear from falling in the shower, slipping on ice and falling out of bed. Ninety six percent of respondents indicated that they knew what to do if a fire occurred in their home. In terms of fire safety education and advice, 80 percent of respondents pointed out that they had not received any fire safety or injury prevention information for more than a year, which was in addition to a further 14 percent who had not received any similar information within the past three years. Table 2 shows the responses for

question 1 of the senior citizen survey questionnaire.

Table 3.shows responses for senior citizen survey questionnaire questions 2, 3, 5 and 6. When asked what community fire safety programs they would like to see improved, 28 percent of respondents listed kitchen and house fires as the most important. Trips and falls was the next highest issue of concern followed by general health restrictions relating to mobility. The research showed that respondents had the strongest preference to view videos and receive lectures when obtaining fire safety information. Responses regarding the areas respondents stated that they would like to see improved as part of a community risk reduction program is shown in Table 4.

The process of community risk analysis saw the completion of a hazardous material and vulnerability assessments template shown in (Appendix I). This process applied a risk rating to identified hazards and vulnerability in terms of the level of destruction and personal harm, economic and environmental implications, social and to some extent political considerations. The research showed that the department's under performance in conducting its annual fire code inspections presented the highest degree of risk to the community given the life, social and economic implications which could arise from this issue. Fire educational and awareness issues for senior citizens and young people followed next, then the threat to firefighter safety and the environment from abandoned buildings within the community.

Table 2

Results for senior citizen survey questionnaire question 1.

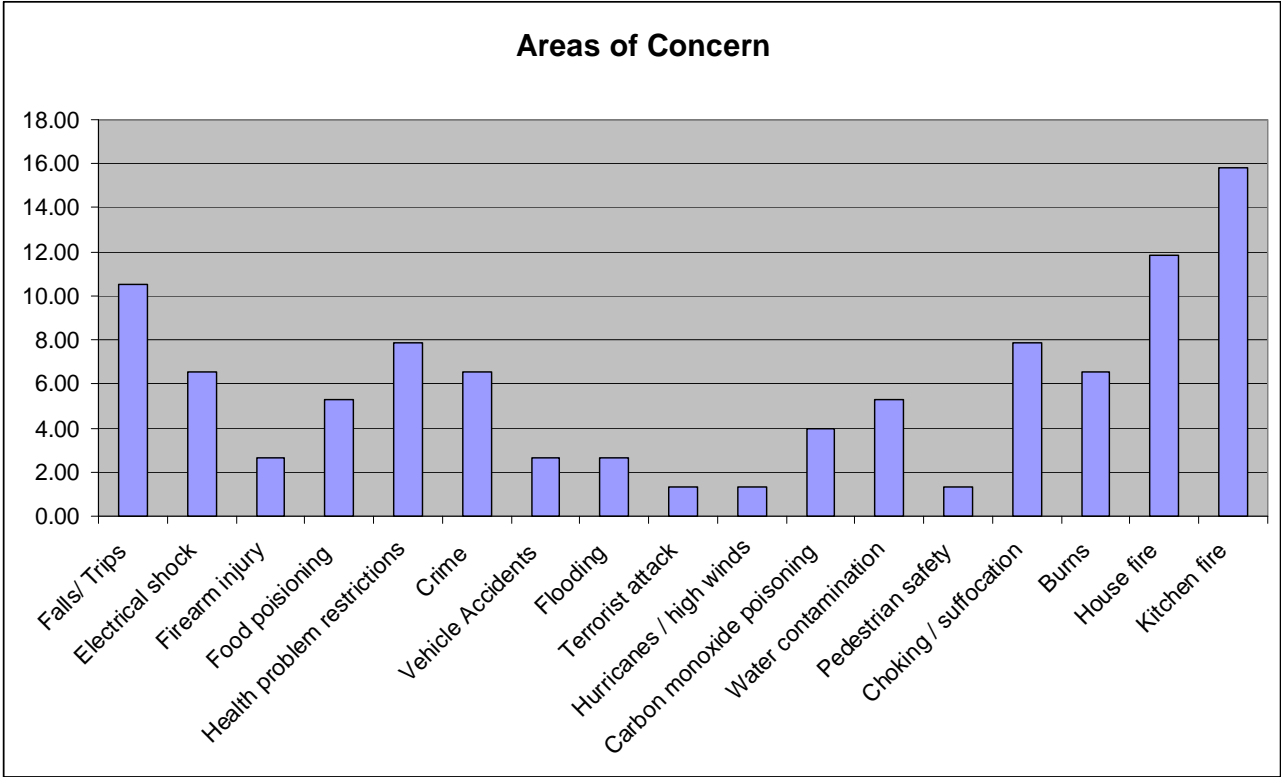


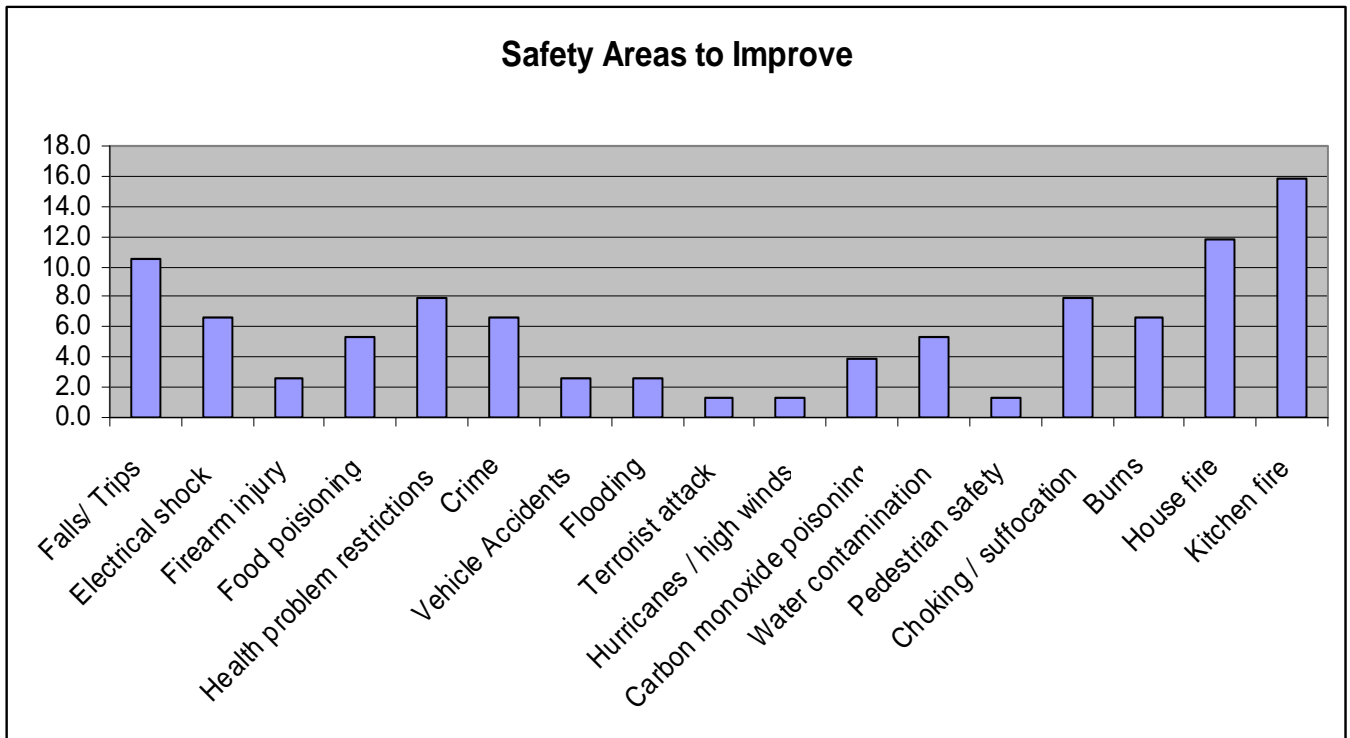
Table 3

Results for senior citizen survey questionnaire questions 2, 3, 5 and 6

2. Do you know what to do if fire occurs in your home	YES			NO	
	96%			4%	
3.Last time you received fire safety advice	Less than 1 week	Less than 1 year	More than 1 year	More than 3 years	
	0%	6%	80%	14%	
5.Preference for Fire Safety message delivery	Demonstration	Lecture	Home Visit	Video	Pamphlets
	15%	35%	10%	30%	10%
6.Preferred Venue	Home	Hall / Firehouse	Senior Club	Group meeting venue	
	31%	9%	9%	51%	

Table 4

Results for senior citizen survey questionnaire question 4.



Summary

This research has shown that the principles of fire education, engineering and intervention would benefit the community risk reduction criterion for New Britain especially when the department's mission and objectives are aligned with community risk reduction outcomes. Although the department's mission statement outlined its focus for preventing fire fighter, injuries and protecting civilians from fire. No evidence of the NBFD having a community risk reduction criteria was found during the review process carried out as part of this ARP. The results of this research highlighted a number of risks, which are intrinsic to developing a community risk reduction criteria for the NBFD. The results of the research have helped to create the template for developing a community risk reduction program for the NBFD. The actions for implementing a community risk reduction criterion for the NBFD are discussed within the recommendations section of this research.

Discussion

The process of community risk reduction is a complex one with many interrelationships which influence the risk reduction process. Nationally, there appears to be a trend, which has seen reductions in financial assistance programs for low-income families. Lav and Carey (2003) argues that this is likely to become a factor which could cause an increase in rental property as the affordability of homes becomes a greater financial challenge. With the high percentage of multi family homes within the community, a 90 percent, annual building fire code inspection shortfall, significantly increases the life risks of the residents in the city and increases the city's vicarious liability. This particular situation presents a number of potential risk issues, which will require urgent redress within the NBFD community risk reduction criteria. Research has indicated that the NBFD does not have service delivery outcomes for community risk reduction. It also appears that the community risk reduction process is a secondary concern to the department.

Although the mission statements of similar departments within the state has not been examined as part of this research, the department's primary focus on firefighting does not appear to be a unique occurrence within the state, given the absence of a community risk reduction strategies within similarly sized departments who were respondents to the survey questionnaire. The fact that in most of the respondent fire department communities enjoy a lower tax mill rate in relation to New Britain, as well as higher literacy and educational levels, further emphasizes the importance of this issue for New Britain. The financial challenges' facing the city makes it unlikely that further socio economic impacts which can increase risk within the community will not be minimized. It is clear that increased crime rates, increased incidents of arson, low detector ownership and fires involving specific minority groups, appear to have its roots in social disparities. Although many fire departments have smoke detector initiatives, it appears that limited consideration is being given to cultural issues and community diversity associated with the community risk reduction process.

Within New Britain, the large number of senior citizens and young people has created a juxtaposition of two high risks groups that presents an additional challenge to the NBFD community risk reduction process. Kraizer, S, Witte, S, Fryer, G.E. & Miyoshi, T. (1990) found that children in socio economically challenged areas were left unattended more often than children living in rural or suburban areas. There is an increased likelihood of arrangements being made with neighbors and relatives, many being elderly to care for the younger children. This could create a situation where young children are being cared for by elderly persons when both groups are considered to have a higher than average risk to suffer fire and fire related injuries. The NBFD is likely to face new challenges from the cultural changes and increasing diversity within its community. The city's literacy levels have shown that there is likely to be a low receptivity to fire safety messages. The large disparity in the number of fires between the lowest and highest median income groups Gunter (1981) is also an important consideration for the NBFD if it is going to implement a successful community risk reduction program.

Recommendations

The research has shown that the process of developing an effective community risk reduction criterion requires the assessment of all risks, which may be present within that particular community. Organizations such as the CDC (1995,1998), FEMA (1997,2004,2006), the NFA (2003) and USFA (2006b, 2006c, 2006d) have outlined important safety practices necessary for the community risk reduction criteria for the NBFD. More importantly however, is the NBFD commitment to and inclusion of the community risk reduction process as part of its strategic goals. Based on the results of this research the following recommendations will support the development of a fire and life safety community risk reduction criterion for the NBFD. It is recommended that the NBFD mission statement is changed to reflect its commitment to make community risk reduction its priority and part of its strategic objectives. Since the current mission statement appears to focus primarily on firefighting. This recommendation will require a realignment of organizational culture to one, which is based on the concept of prevention. It is critical that the revised mission statement

and strategic objectives remains consistent with the principles articulated by the USFA to support fire prevention efforts and stop fires from occurring in the first place. As part of this recommendation, two additional actions are also necessary. First, the department's new draft mission statement “ *to minimize community risks and improve the quality of life for all persons within New Britain*” (NBFD, 2006a), is reviewed for inclusion into the department's organizational statement and community fire safety plan, since it is broad enough to include the community risk reduction process rather than having a narrow focus solely on firefighting activities. Second, the draft community fire safety plan (NBFD, 2006) titled *Prevention is better than Cure*, specifies departmental objectives to develop fire safety education and awareness programs within the community, proactive identification of actual and anticipated risks and the enhancement of fire code enforcement activities for all certifiable premises, is reviewed and disseminated throughout the department and community, so that the department's stakeholders are aware of and understand the focus being given to the community risk reduction process, and as such help to build community equity.

It is recommended that the community risk reduction methodology as outlined within the FEMA, 2002 publication *A Five-step process*, forms the basis of the NBFD community risk reduction efforts. This process needs to adopt a continuous community risk analysis, in order to develop the framework to address actual and anticipated fire and life safety risks, which considers damage, economic, environmental, social and political implications (NFA 2003, p. SM 2-5 –SM 2-23), (Appendix I). The research highlighted that 90 percent of the department's annual fire code inspections were not completed. In addition to placing the city's residents at greater risk, it exposes the city vicariously. Although the problem could be addressed economically by increasing the number of fire inspectors within the NBFD, and making available administrative support services, the city's economic situation makes this proposal an unlikely option. It is prudent that immediate actions are taken to reduce the risks arising from this situation since the majority of multi family residential buildings are high-density occupancy rental

properties with many minority group and children inhabitants. Considering the convergence of the multiple risk factors, the hazard and vulnerability assessment has shown this as the top priority for the NBFD community risk reduction criteria.

It is recommended that the city's fire fighters proactively carry out home safety surveys within multi family homes not inspected by the city's fire inspectors. This process allows firefighters to carry out home safety surveys with particular emphasis on life safety risks and an opportunity to educate premises occupants about unsafe practices. More importantly, this process highlights serious code infringements to fire inspectors earlier than having to wait for the fire inspectors to visit that particular building. The distribution of safety literature and issue of smoke detectors where necessary and actions to encourage owners to take advantage of NFPA's economic incentive sprinkler program (NFPA, 2003) in order to reduce community risk.

To support this recommendation, the following draft policies should be reviewed and implemented within the department. NBFD: 001 *Fire Code Inspections* (Appendix E), which gives guidance to firefighters for evaluating fire code infringements during home safety surveys which can be reported to the department's fire inspectors. NBFD:002 "*Smoke Alarm Policy*," (Appendix F), which outlines the process of supplying and where required, installing smoke detectors in homes, in particular those homes with high risk and special needs occupants within the community, also NBFD:004 "*Home Fire Safety Surveys*", (Appendix G), which gives guidance on conducting home safety surveys. It is also recommended that the practical training guidelines within NFPA publication *Guide for Training Fire Service Personnel to Conduct Home Fire Safety Surveys* (NFPA, 2005) is made available to firefighters.

The community risk reduction process must determine the most effective methods of reducing risks within the city's target audiences, so every opportunity needs to be utilized to communicate the importance of fire safety given the challenges, which can be encountered. According to FEMA (2004), with smoking and arson being the leading cause of fire deaths highlights the importance of making people in the community aware to the dangers of fire. The

fact is that whenever a fire occurs, it grabs people's attention and as such can be is very powerful stimulus for receptivity. By its very nature, this creates an opportunity to firefighters to disseminate fire safety information.

It is recommended that the draft NBFD policy NBFD:003 "*Quick Strike Campaign*," (Appendix H), is reviewed and implemented. This policy gives firefighters guidance in giving fire safety advice to residents and persons within the vicinity of recent fires to reduce community risk. The results of this research also highlighted a concern among senior citizens for situations where fire doors were continually left in the open position and the risk this posed to securing efficient means of egress in the event of a fire. The fact that fire safety talks to senior citizens had occurred so infrequently is an issue for the department's risk reduction process.

It is recommended that in order to reduce fires and injury incidents involving senior citizens, the NBFD must develop and implement a fire education program targeted at the growing elderly population while taking into account the importance of race and diversity given the fire injury and death rate being ten time greater than the national average for this particular group (USFA, 2004). This program needs to have the resources to ensure continuity and cover the subjects pertaining to burn and injury prevention such as trips, falls etc. This recommendation also requires a training program to be developed to prepare firefighters to give safety lectures for the city's senior citizens. It is equally important that the delivery of fire safety information is structured around the senior citizen preferences to use lectures and video demonstrations. Although the percentage of injuries in children declined between ages 6 to 9 years, on a national level, and injuries in children actually increasing between the ages of 10 and 14 years group USFA (2004), it is equally important for the department to ensure that its educational activities for young children, is delivered for age groups between pre kindergarden and the tenth grade.

It is recommended that the NBFD develop a children education strategy, which delivers fire safety education and awareness activities for pre kindergarden to sixth grade and develop

community youth activities for grades six to ten. These programs should follow the program guidelines developed within the NFPA's (2006) *Learn not to burn*, student curriculum along with the child education program developed by the American Red Cross titled, *Masters of disaster*. It is vital that FEMA's (2002 a) publication *A Five-step process*, is adhered to for *all* initiatives and duly incorporate a system of measurement and evaluation in order to determine the effectiveness of these programs. It is important for the department cultivate partnerships within the community to ensure the success of its community risk reduction programs. The establishment of partnerships has the benefit of reducing the overall program costs to the department in addition to building commitment to the process.

It is recommended that the development of community partnership group is established and include neighborhood groups for senior citizens and the local area regenerations groups, government agencies, religious groups, health and social services etc.

It is also recommended that the department review the recruitment targets outlined within its draft NBFD (2006) community fire safety plan titled *Prevention is better than Cure* and implement as targets in order to achieve a more demographically representative workforce, to help build community equity. It is likely that cultural differences within the community may present a number of challenges for the NBFD therefore, it is very important that its employees receive diversity training and support to enhance the department's working relationship with its customers.

It is recommended that the department arrange for all employees to receive community diversity awareness training in addition to developing and providing literature for firefighters on cultural customs, practices and differences for groups within the community. In this way, the NBFD can develop more effective risk reduction initiatives which take account of cultural differences while recognizing and valuing diversity within its community risk reduction programs. The research showed that resources and funding given by the Federal government for

community risk reduction programs was insufficient to maintain long-term risk reduction initiatives. In order to support the NBFD risk reduction strategy.

It is recommended that the department petition its local and federal legislators to obtain support for grant funding. It is also recommended that the grant application process includes community group. This research also highlighted that abandoned buildings were becoming more prevalent within the city, which in turn created not just greater fire risks but actual firefighter injuries. To minimize the degree of fire spread and personal risks. It is recommended that the NBFD implement a system of inspection and tagging of abandoned buildings to highlight fire risks and hazards, which maybe enclosed. Placards or marks on vacant and abandoned properties will provide a visual indication of the potential hazard the structure poses to emergency responders (USFA/IAAI, 2006).

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Appendix A

Please outline the Community Risk Reduction (CRR) initiatives the State Fire Marshal's office has implemented for Connecticut.

If no CRR initiatives are implemented at this time, can you indicate if any CRR initiatives are planned for the future and if so, what will be the nature of those initiatives?

Please indicate what are the specific objectives for any CRR programs in force or being planned.

How are existing or planned CRR programs likely to be supported?

Please specify any successful CRR initiatives implemented for the State within the past 3 years.

Appendix B

Please outline any Community Risk Reduction (CRR) initiatives the CFPC has implemented for Connecticut.

Please list any CRR initiatives planned for the future and the nature of those initiatives?

Please indicate what are the specific objectives for CRR programs in force or being planned.

How are existing or planned CRR programs being supported or likely to be supported?

Please specify previous CRR initiatives implemented by the CFPC in the State during the past 3 years.

Appendix C
Senior Citizen survey

See Risk List Numbers on Page 2

1. What risks cause you the most concern?

List Numbers or Specify	
----------------------------	--

2. Do you know what to do if a fire occurs in your home?

Yes	No
-----	----

3. When last were you given advice on fire safety or injury prevention? TICK BOX

Less than 1 week	Less than 1 year	More than 1 year	More than 3 years
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4. What areas would you like our community fire safety programs to improve?

List Numbers or Specify	
----------------------------	--

5. What are your preferred methods to receive fire safety education information?

LIST ORDER OF PREFERENCE (1 to 5) "1" IS THE BEST.

Demonstration	Lecture	Home Visit	Video	Pamphlets
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6. What are your preferred locations to receive fire safety education information?

Home	Hall / Firehouse	Senior Centre	Group meeting venue
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Number List

Table of Risks

Injury risks		Fire risks	
1	Falls / Trips	16	Burns
2	Electrical shock	17	House fire
3	Firearm injury	18	Kitchen fire
4	Food poisoning		
5	Health problem restrictions		
6	Crime		
7	Vehicle accidents		
8	Flooding		
9	Terrorist Attack		
10	Hurricanes/ High Winds		
11	Carbon Monoxide poisoning		
12	Water contamination		
13	Communications		
14	Pedestrian / Bike safety		
15	Chocking / Suffocation		

Appendix D

Copy of cover letter to State of Connecticut Commission on Fire Prevention and Control and Office of State Fire Marshal.

Date:

Mr

Dear Mr.....

I am currently enrolled in the Executive Fire Officer Program at the National Fire Academy. This four year process requires the completion of an Applied Research Project each year on an issue directly related to the New Britain Fire Department.

I am carrying out research into the area of "Community Risk Reduction ." As part of the information gathering process, I have attached a questionnaire, which is designed to provide me with information on your agency's activities in this area.

I fully understand the demands and requirements of your busy schedule therefore I have made this survey as short as possible. Please know that I am grateful for your time in completing this survey, which I would appreciate being returned to me before October 30th 2006. Kindly complete the attached questionnaire and e-mail it back to me. i.e. the originating e-mail address. You can also fax a completed questionnaire to FAX: (860) 612 4222. Marked Attention of Fire Chief Mark Carr

Once this research is completed I would be happy to supply you with a copy of my final document on request. I can be reached at 860 978 4160 to discuss this questionnaire or any further information. Thank you once again for your cooperation.

Sincerely,

Mark Carr
Fire Chief.

Copy of cover letter to similarly sized fire departments

Date: October 8th 2006.

Chief,

I am currently enrolled in the Executive Fire Officer Program at the National Fire Academy. This four year process requires the completion of an Applied Research Project each year on an issue directly related to the New Britain Fire Department.

I am carrying out research into the area of Community Risk Reduction programs. As part of the information gathering process, I have attached a questionnaire which is designed to provide me with information on your department's activities in this area.

I fully understand the demands and requirements of your busy schedules and have made this survey as short as possible. Please know that I am grateful for your time in completing this survey, which I would appreciate being returned to me by October 24th 2006.

Kindly complete the attached questionnaire and e-mail it back to me. i.e. the originating e-mail address. You can also fax a completed questionnaire to FAX: (860) 612 4222. Marked Attention of Fire Chief Mark Carr

Once this research is completed I would be happy to supply you with a copy of my final document on request.

I can be reached at 860 978 4160 to discuss this questionnaire or any further information.

Thank you once again for your cooperation.

Sincerely,

Mark Carr
Fire Chief.

Copy of cover letter to agencies for senior citizen survey questionnaire.

Dear

I am carrying out research into the area of Community Risk Reduction programs and would like your assistance in obtaining information relating to fire safety issues pertaining to senior citizens within our community.

In order to establish an effective community risk reduction program, it is important that our citizens are able to let us know about their needs and expectations, so that the information given is appropriate and support their overall safety. As part of this information gathering process, I have attached a questionnaire which is designed to provide me with information on your department's activities in this area.

I am currently enrolled in the Executive Fire Officer Program at the National Fire Academy. This four year process requires the completion of an Applied Research Project each year on an issue directly related to the New Britain Fire Department. As Fire Chief, I am committed to developing public safety and will be using this research project to support my analysis of the community so that an effective community risk reduction program can be implemented.

Please know that I am grateful for your time in completing this survey, which I would appreciate being returned to me by September 30th 2006.

Kindly complete the attached questionnaire to your representative. I will collect completed forms at a mutually agreed time and date from those individuals. The information provided is confidential and will not be referenced to you in any aspect. You are not required to place your name on the enclosed survey form.

Thank you once again for your cooperation.

Sincerely,

Mark Carr
Fire Chief.

Appendix E

DRAFT COMMUNITY FIRE EDUCATION FIRE SAFETY SURVEY PROGRAM	
OPERATIONAL INSTRUCTION	CFE: 001
STATUS:	This instruction is mandatory
AUTHORITY	Mark Carr Fire Chief
SUMMARY	This instruction gives guidance on the implementation of the Fire Safety Survey Program.
DATE	DRAFT

1. INTRODUCTION:

1.1 The intent of this policy is to provide fire service personnel with a guide to implement a building fire safety program for the community.

2. PURPOSE:

2.1 This Official Notice establishes the procedure for Fire Company Surveys.

3. SCOPE:

3.1 To all Fire Fighting Companies.

4. POLICY:

4.1 Fire Company Surveys serve three purposes. The first function of these surveys is to familiarize company personnel with the buildings they will be responding to for fire and emergency calls. This shall include the building construction and fire fighting systems.

4.2 The second function is the identification of fire hazards. Easily correctable hazards shall be dealt with at the company level. When a Company Survey reveals a serious hazard that presents an immediate threat to life or public safety the appropriate enforcement agency shall be immediately notified.

4.3 The third function is educating the public in fire safety. Public fire educating and an increased level of safety awareness have a direct correlation to the number of accidental fires and resulting injuries within the community.

5.PROCEDURE:

5.1 Fire Company Surveys will be conducted each day shift and will be coordinated by the Company Captain in their assigned district. The Company Officer, and at minimum one other firefighter, should make contact with the properties occupants and secure permission to perform a fire safety survey. This will be limited to the areas that this occupant has legal control over, i.e. their apartment and the common public areas.

6. SURVEY METHOD:

6.1 The department's Home Fire Safety Survey Form shall be used for residential occupancies up to three families. The Fire Safety Survey Form shall be used for residential dwellings over three families and commercial properties. These forms are attached to this notice. Also please find the Safety Survey Suggestion Sheet as a memory aid for some common hazards and a Smoke Detector placement sheet. These forms should be filled out completely during your survey. The first part of the form is gathering information that is to be inputted, upon return to quarters, into the occupancy module of the Firehouse software.

6.2 The second part of the form is a check off of commonly encountered hazards. The Safety Survey Suggestion Sheet can be of assistance during this phase. Finally the company members should conduct pertinent fire education to the audience encountered. A diverse array of educational materials will be made available for distribution.

6.3 The Company Captain will work in conjunction with the Fire Marshal's Office in respect to number of inspections, types of occupancies, and problems encountered during these inspections.

Appendix F

DRAFT COMMUNITY FIRE EDUCATION NOTE
Smoke Alarm Policy

COMMUNITY FIRE EDUCATION INSTRUCTION	CFE: 002
STATUS:	This instruction is mandatory
AUTHORITY	Mark Carr Fire Chief
SUMMARY	The policy gives guidance on the process to follow in supplying and installing smoke alarms within the community within fire safety education and surveys.
DATE	

1 INTRODUCTION

1.1 It has been proven that the installation of domestic smoke alarms gives occupiers early warning of fire, allowing a greater chance of escape; hence reducing the likelihood of injury or death.

1.2 Community Fire Education and Safety is a core function of the New Britain Fire Department (NBFD) and of its employees. The installation of domestic smoke alarms supports this function and designated employees are therefore required to undertake this activity.

1.3 This policy document provides the framework for such activity, and outlines the procedures to be followed by the department's fire-fighters. This includes methods for installing smoke alarms according to manufacturers' installation instructions.

2 OBTAINING SMOKE ALARMS

2.1 Domestic smoke alarms can be obtained by station personnel from the Fire Marshal's Office or smoke alarms allocated to the Deputy Chiefs (Shift Commanders)

2.2 Only smoke alarms, which meet or exceed U.L. Standard 217 shall be supplied or installed.

3 PROVISION OF ALARMS

3.1 As a general rule, smoke alarms should only be installed in homes where owners/occupiers are unable to do so for themselves or unable to get another person to do so on their behalf. Other community groups or organizations may already be available and willing to carry out the installation of alarms, as part of an agreed plan of action in partnership as part of your initiative/program.

3.2 In rental property where the Fire Department is asked to install a smoke alarm on the tenant's behalf, it shall be determined that the tenant has permission from the owner of the property. Cases where the absence of smoke alarms conflicts with NFPA or City smoke detector installation guidance must be brought to the attention of the Fire Marshal's Office.

3.3 It should also be remembered that normally only one alarm should be installed/supplied free of charge per household. When it is considered the property would benefit from more than one alarm, the occupier should be advised accordingly. However if a justified case can be made to install more than one alarm this should be done.

3.4 In each case the owner/occupier should be given information relating to the installation, operation and maintenance of the alarm along with information on general fire safety in the home.

3.5 Fire-fighters should specifically make sure that the occupant has been made aware of the features of the alarm and how each of its functions operates.

4. INDEMNITY/ LIABILITY

4.1 Before supplying or installing an alarm, the recipient should be read, have explained and sign the indemnity form. (Appendix 1) The recipient should be made aware that the alarm is not a substitute for insurance and neither the supplier, manufacturer or installer would be held liable for injury/death to persons, or damage to property as a result of any subsequent fire.

4.2 This message although important, should be given in a positive manner, emphasising the benefits of smoke alarms over the likelihood of any product malfunction.

4.3 The indemnity form should be offered to the owner/occupier for signature. This will serve a number of purposes:

- Pass the responsibility for maintenance of the alarm to the owner/occupier.
- Provide statistical data for future community safety and education
- Act as a receipt for the alarm.

4.4 The owner/occupier should be given a copy of the signed form, along with the smoke alarm. One copy of the indemnity should be sent to the Fire Marshal's Office on return to station. One copy should be retained at the fire station for records.

4.5 If the occupier **refuses to sign** the indemnity form, the alarm **must not be installed**, but supplied only.

4.6 The indemnity form should be completed by the line officer, and clearly marked "**supply only**" and note the circumstances, and refusal to sign, in the comments section of the form.

5. GUIDANCE FOR PERSONNEL INSTALLING DOMESTIC SMOKE ALARMS

5.1 Statistics suggest that people whose homes do not have a working smoke alarm are four times more likely to die should a fire occur in their home, than those who do have a working smoke alarm.

5.2 A smoke alarm can give those precious few minutes of warning, which could enable the occupants to escape safely.

5.3 A minimum of two members per Fire Company shall be used to install smoke alarms. In all circumstances, the following instructions shall be observed:

- No one member of staff is to take any undue risk in trying to achieve the task.
- Should the use of a ladder be required, then it is to be used correctly and safely.

6. INSTALLING OF ALARMS

6.1 Smoke alarms should be installed according to the provided manufacturers' installation instructions. (see Appendix 2)

6.2 Installation of smoke alarms should take into account any control measures, for the protection of personnel from identified hazards, in accordance with the task Risk Assessment.

6.3 Smoke alarms should always be sited in accordance with the guidance literature provided.

6.4 Prior to installing, a thorough check must be made of the surface to which the alarm is being installed.

6.5 If in doubt do not attempt to install, explain to the owner/occupier that there is a possibility of damage, and refer to the line officer.

6.6 Instruction should always be given to the occupier on every occasion on:

- Testing of the alarm
- Frequency of test
- Replacing the battery
- Maintenance and cleaning of alarm

6.7 The alarm must be tested in the presence of the occupier and left in working order.

6.8 If fire-fighters feel that installing a detector is outside their ability, then under no circumstances should attempts be made. The case should be referred back to the Deputy Chief who can then seek to make further arrangements.

6.9 A department step ladder and drill kit should be utilized to install the smoke alarms.

7. PLACING OF SMOKE ALARMS

7.1 The most dangerous time to have a fire is during the night or when people are asleep in bed. The purpose of a smoke alarm is to alert the occupants in case of fire.

7.2 A smoke alarm should always be placed between the cooking and living area and the bedrooms. Ideally there should be at least one alarm on each level of the home.

7.3 The alarm should be placed centrally on the ceiling (at least 12 inches from the walls), away from lights which may impair the effective operation of the alarm.

7.4 Remember the occupier/owner will need to test the alarm and change the batteries so do not place it directly over stairwells or other hazards.

7.5 If it is not possible to mount the detector on the ceiling, then it may be placed on the wall 6 to 12 inches below the ceiling and well away from room corners.

7.6 Some properties have sloped ceilings; if so, the detector should be placed along the slope of the ceiling at least 3 feet from the highest point.

7.7 Before you install the alarm, test it in the presence of the occupant. Always demonstrate that it is in full working order before leaving.

7.8 Smoke alarms are not designed to work in extreme heat or cold, or in areas where smoke and dust are common. They **should not** be installed in unheated attics or similar places.

7.9 Do not position smoke alarms too close to the kitchen where cooking fumes may cause frequent detector actuation. The same principle applies to smoke alarms positioning by the bathroom where steam may cause frequent detector actuation.

8. MAINTENANCE OF SMOKE ALARMS.

8.1 To keep the alarm in good working order, the owner/occupier should be instructed to:

- Test the smoke alarm weekly to ensure alarm circuitry and battery power source are operating correctly. Simply press the test button or outer casing, dependant on the type of alarm.
- Change the battery according to manufacturers' recommendations. Fire Department supplied alarms have a standard battery. They are to be changed when the low warning "beep" sounds.
- Vacuum the inside of the smoke alarm when changing the battery to remove any dust from the sensor chamber that may impair the efficiency of the unit.

- Under no circumstances remove the battery to use in other devices such as remote controls, children's toys, etc. If they do so the alarm cannot work when it is needed.

8.2 In the event that an existing smoke alarm is in a low battery alert (chirping) or the battery is missing. A battery may be installed if the owner does not have one readily available. The smoke alarm disclaimer form shall still be used with a note in the comment section that only a battery was supplied.

Smoke Alarm Installation Disclaimer

Members of the New Britain Fire Department (NBFD) have offered to provide you with or / and install a smoke alarm in your home. Our aim is to make our community a safer place for all.

You will need to sign this disclaimer form which confirms that the NBFD and the City of New Britain, are not to be held liable for the costs, expenses, loss, claims or proceedings resulting from any damage or any claim resulting from carrying out the home fire safety provision and / or installation of a smoke alarm *or failure of the smoke alarm to operate*. We hope you are happy with your free smoke alarm.

Kindly read this form and ensure you understand it before you sign it.

In consideration of the NBFD sending personnel to my home to provide and/or install a smoke detector I agree to the following:

1. *I agree to the installation and/or provision of the smoke alarm.*
2. *I agree that once the smoke alarm is provided / installed, it becomes my property.*
3. *I agree that a member of the NBFD has checked the smoke alarm and has shown me that it works properly.*
4. *I agree that it is my responsibility to maintain the smoke alarm according to the manufacturer's recommendations. I understand that it is not the responsibility of the NBFD, the city of New Britain or the person who installed the smoke alarm.*
5. *I agree that I have been shown a copy of a leaflet about smoke alarms and how to maintain them.*
6. *I understand and agree that I will not make any claim against the NBFD or the City of New Britain. for any expense, cost, liability, loss, claim or proceedings which relate to the providing of or installation of, or the operation of the smoke detector in my home. In addition, I agree to hold harmless and indemnify the city of New Britain and the NBFD from any and all claims, costs, expenses or liabilities incurred in connection thereto. In the case of a claim or lawsuit brought against the city of New Britain or NBFD, the undersigned, upon notice, shall resist and defend such claim or lawsuit.*

Name of Occupant				
Signature				
Date		Fire Company		
Address				

Action	Installed		Supply
# of smoke alarms			

Comments

Appendix G

DRAFT COMMUNITY FIRE EDUCATION Guidance for : Conducting Home Fire Safety Surveys	
OPERATIONAL INSTRUCTION	CFE: 004
STATUS:	This instruction is mandatory
AUTHORITY	Mark Carr Fire Chief.
SUMMARY	This instruction gives guidance to personnel in preparing for and conducting premises Home fire safety surveys.
DATE	DRAFT

1. INTRODUCTION

- 1.1. The intent of this document is to provide fire department fire service personnel with a guide for the establishment of a community fire safety program for Homes. This document serve as a supplement to the Department’s Community Fire Education instruction CFE:001 Fire Safety survey program.
- 1.2. Because the majority of fire deaths occur in residential occupancies, it is essential for the Department to proactively undertake fire safety surveys to better protect the residents of its community.
- 1.3. To be effective and to adequately identify and deal with local fire problems and fire risks, solutions to identified problems should be developed locally. This document is a basic guide for firefighters carrying out Home Fire Safety surveys. Home Fire Safety surveys will be utilized for single-family as well as multifamily Homes, such as apartments, town houses, and condominiums.
- 1.4. Some of the benefits obtained from carrying out this activity include:
 - Increased productivity from greater work effectiveness
 - Increased contact with the community and partnership development.

- Familiarization with residential properties
- Reduction of the risk of fire within properties.
- Increasing the awareness of residents to fire safety issues.
- Protective measures to improve the quality of life

2. PURPOSE:

- 2.1. Because we are responsible for the protection of life and property. If the downtrend in national residential fire deaths years is to continue, a community effort toward public fire safety education including fire-safe behaviors and the use of smoke detectors, residential fast-response sprinklers, and a fire escape plan is critical. Home safety surveys are a proven method in successfully lowering loss of life, injury, and property damage from fire.
- 2.2. In addition to reducing loss of life and property damage, an effective Home fire safety program can generate positive opportunities, which benefits the department and the community:
- 2.3 Citizens see how they are getting more for their money in terms of a comprehensive fire service organization.
- 2.4 Meeting residents of the community on a one-to-one basis and distributing various fire prevention literature, telephone stickers, and other fire safety information also answering specific fire protection or fire safety inquiries
- 2.5 Allowing fire fighters to become better acquainted with street names and layouts, hydrant and water supply and lock box locations, community development, and home construction, as well as pre-fire planning.
- 2.6 Discuss findings during training sessions to support the professional development of fire fighters engaged in the program's activities.
- 2.7 Allowing firefighters to become acquainted with construction types, interior designs, avenues of fire spread, and locations of various concealed spaces. For example, the entrance to attics and crawl spaces can be determined prior to an emergency.

2.8 Distribution of fire safety materials.

- 2.8.1 Fire safety surveys of Homes provide the fire department with one of the best means of delivering public fire prevention education through direct contact with residents of the community and distribution of fire prevention literature directed at the local fire problem.
- 2.8.2 Officers should consider the use of fire education materials in different languages in order to effectively deliver safety messages in all parts of the community. .

2.8 Continuing Home Survey Programs.

2.8.1 The fire department will look beyond the immediate short-term benefits by continuing to analyze and evaluate the effectiveness of the program and its continued ability to address the current local fire problems.

2.8.2

The department realizes that the planning, implementation, and evaluation processes needs to be a continuous cycle that reacts to the varying needs of the community.

3 OBJECTIVES AND EVALUATION

3.1 The New Britain Fire Department’s goals and objectives for the home fire safety program includes

- The percentage of Homes to be surveyed,
- Areas of operation,
- The schedule of surveys

3.2 a periodic program evaluation to identify any changes to the program operation in order to increase its effectiveness and track progress will be carried out.

3.3 The Captain of each fire company will be responsible the effective operation of the home fire safety program for their company. They are responsible for:

- Scheduling
- Evaluation of quantity and quality of home surveys
- Fire Companies shall receive credit for each living unit surveyed. Although it is important to survey all living units, the company may not have the opportunity to complete an entire unit.
- Each company Captain shall maintain a log of all surveys conducted. The log shall include the following information:
- Location
- Officer responsibility
- Status of survey
- Completion date

3.4 Each company Captain shall carry out **quarterly reporting** to the Fire Marshal’s Office on the progress of the program.

3.5 Data entry of survey information into the Firehouse software record management application

4 PLANNING

4.1 Careful planning and preparation are essential if a home fire safety survey program is to be successful. Every department member is responsible for educating the people of the community that the program is beneficial.

4.2 Home surveys should be “sold” to the public. Homeowners should be fully informed of the value of surveys, including how such surveys can save lives and protect their homes from fire. Careful planning and widespread community support will increase the overall success of these programs. **Departmental customer surveys will be utilized by management to determine the quality of personnel visits.**

5 SURVEY COMPETENCE.

5.1 Fire fighters must behave appropriately during surveys. Each firefighter should be able to explain.

- Proper methods of introduction and explanation of program rationale for the homeowner
- Understand that securing permission from the homeowner to perform the Home survey is voluntary. (A homeowner’s refusal to allow an inspection must be documented.)
- Common fire hazards that can be expected to be found in a Home
- Provisions of the local fire code that are applicable to Homes (Inspections generally should be made as a courtesy, not because of fire prevention laws.)

5.2 Size of Survey team.

5.2.1 Home surveys should be conducted by a minimum of two fire fighters. Because the presence of too many fire fighters at a single Home could be perceived as an authoritative force, The recommended inspection team should be 2 firefighters

6 PROGRAM DURATION

6.1 Surveys of homes will be carried out on an annual basis. The program should contain elements to be emphasized during specific times of the year, such as access to fire hydrants or heating equipment problems during winter months.

6.2 Buildings to Be Surveyed.

6.2.1 Every 3 and above multiple family home units in the fire department's jurisdiction will be included within the survey program.

6.2.2 Single family residents will also be surveyed if requested by the public or instructed by the Fire Marshal’s office.

6.3 Scheduling of surveys

6.3.1 The scheduling of home surveys should take into consideration citizens' receptiveness to the program.. The best times to conduct Home surveys are midmorning (9 a.m. to 11 a.m.) and mid-afternoon (1 p.m. to 3:30 p.m.), Monday through Friday, except holidays. Line officers should consider scheduling weekends and evenings in order to make contact with residents for survey purposes.

6.3.2 If any evening survey are scheduled no visits should be conducted no later than 8pm.(20.00 hrs)

7 SURVEY PROCEDURES

- Before leaving the station, the officer in charge should ensure that all fire fighters are in proper uniform and are properly equipped. A clean work uniform with proper insignia or identification is necessary.
- All Firefighters should be familiar with the survey guidelines listed within Appendix A and B . These appendixes gives guidance on the common type of hazards found in homes also information on Life safety when giving advice to persons on fire safety.
- Fire apparatus utilized by the surveying fire fighters should be kept in proximity to the area being surveyed to facilitate a quick response to an emergency alarm. Alarm notification can be accomplished through the use of normal and accepted wireless communications.
- A Firefighter must stay with the apparatus in the interests of security and to notify the remaining crew members through a pre designated signal, such as sounding the vehicle siren or air horn or portable communications.
- Firefighters assigned to the vehicle should be aware and cautious of children in the vicinity of the vehicle, particularly during times of vehicle movement.
- Firefighters should also be prepared to answer questions from the public relating to both the apparatus and fire safety in general.
- The officer in charge should assign a team of fire fighters to survey Homes. This will mostly be two-person teams. On no account should a single fire fighter be allowed to carry out a home safety survey.
- A residence should be approached by a walkway or path, not by walking across the lawn.
- Fire fighters must not smoke during a survey.
- If the occupant is home, the fire fighters should introduce themselves, show proper identification, explain the purpose of the visit, and ask permission to enter.
- If admittance is refused, the fire fighters should thank the occupant and leave appropriate fire prevention materials.
- Once inside the Home, the survey should begin without delay. Fire fighters are to be helpful and courteous at all times.
- Firefighters should take care to avoid unnecessary conversation, because they can overlook a potential fire hazard and slow down the survey.
- Because fires can occur in any room, the entire Home should be surveyed. However, if the occupant objects to survey of certain rooms, the occupant's wishes should be respected. **Closets and cabinets should be opened by the homeowner rather than the fire fighters.**
- Fire fighters must remember that a survey is voluntarily accepted by the occupant. The occupant should be asked to accompany the fire fighters to see and to hear explanations of any fire hazards. If the

occupant is unable to accompany the fire fighters, the survey should be rescheduled for a more convenient time.

- ***Fire hazards identified should be noted on the survey form. This form is only a list of recommendations, not of violations. However, if a hazardous situation that violates local fire regulations is found, it should be recorded and forwarded to the FMO.***

An example would include: Surveying fire fighters find a home where smoke detectors are not present, the resident should be advised to obtain one and a notation of the recommendation should be made. During the survey, the fire fighters must not argue any point, but merely make suggestions. The purpose of the survey is to eliminate hazards to life and property, and all conversations should be directed toward this goal.

SURVEY FORMS

- 7.1 The survey form should be filled out completely and in triplicate. The pink copy should be forwarded to the Fire Marshal 's Office only after the full building inspection is completed.
- 7.2 If no hazards are found during the survey, the occupant should be complimented for his or her efforts. Prior to leaving the premises, the fire fighters should sign the survey sheet, and the original should be left with the occupant.
- 7.3 Questions asked about the department should be answered. Questions regarding policy matters should be referred to the company officer and should not be answered by fire fighters. If the answer to any question is not known, fire fighters should research the matter and advise the resident as soon as possible. Fire fighters should realize that many persons will base their opinion of the entire fire department on this one contact; therefore, a professional attitude and demeanor must be maintained at all times.
- 7.4 The New Britain Fire Department has discontinued providing window decals for invalids because these signs are now believed to identify the home as an easy target for burglary or robbery. The City's emergency management special needs database addresses this issue.
- 7.5 Prior to leaving the premises, the fire fighters should make sure the occupant understands any fire hazards that have been found and what corrective action should be taken. Literature should be provided, and an invitation should be issued to the occupant to stop by the fire station any time he or she has a question relating to fire safety or is interested in learning more about services offered by the fire department. Last, but not least, the occupant should be thanked for allowing the survey to be conducted.

Policy adapted from NFPA 1452; Guide for Training Fire Service Personnel to Conduct Home Fire Safety Surveys; 2005 Edition. Nation Fire Protection Association; 2005.
Common Hazards Found in Homes

Appendix H

DRAFT COMMUNITY FIRE EDUCATION Quick Strike Campaign	
OPERATIONAL INSTRUCTION	CFE: 003
STATUS:	This instruction is mandatory
AUTHORITY	Mark Carr Fire Chief
SUMMARY	This procedure gives guidance on the purpose and implementation of the Department's fire safety quick strike campaign.
DATE	DRAFT

1. INTRODUCTION:

1.1 The purpose of this document is to establish a procedure that will direct companies on how to disseminate important fire safety information to people within a specific neighborhood or area after a recent fire.

2. SUMMARY:

2.1 These procedures will assist officers and firefighters in effectively distributing critical fire safety information and education so as to try to prevent other similar types of fires from occurring in the same neighborhood as the recent fire. These actions are designed to capture people's attention to home fire safety while the event is still fresh in their minds

3. PROCEDURE:

3.1 Each company will be provided with a packet of brochures pertaining to fire safety information. The packet will contain information on the most commonly associated cause's fires as well as information regarding actions people can take to protect themselves from fire. If a company requires replenishing of brochures the Fire Marshal's Office (FMO) will provide the additional materials. FMO Tel: 860 826 3450.

3.1.2 The scope of the area to be canvassed will be determined by the occupancy. For example a fire in an apartment building may require canvassing the fire floor, whereas a fire in a residential area of single family dwellings may require canvassing the adjacent homes and home across the street. If a citizen not from the designated canvass area approaches the company during this activity, nothing precludes the company from disseminating fire safety information to this person.

3.1.3 Prior to a company canvassing a neighborhood a representative from the F.M.O. normally the fire investigator will provide the company with any necessary information regarding either the fire cause or contributing factors when possible to the company. The purpose of this information is to have the company prepared to provide relevant information to the local residents.

3.1.4 In order for the information/education exchange to have an impact on the local residents the information must be provided as soon as possible while the incident remains recent in people's minds. The aim is to have a company to go out within twenty four hours of the incident to the local neighborhood.

3.1.5 If circumstances permit, after an incident has been brought under control and while companies are on scene some information can be provided to bystanders regarding general fire safety information i.e. smoke detectors. An example of some of the materials that would be contained in the packet would be brochures on cooking safety, candle safety, general fire hazards in the home, smoke detectors, exit drills etc.

3.1.6 To determine the effectiveness of this initiative, the department will be carrying out verification and validation of these activities. This will be completed during the departmental audit process and customer care feedback and evaluation process.

Appendix I

CHECKLIST 1

This is a task checklist for Step 2 in the community risk reduction model. The checklist is intended to be a tool used to identify progress on completing a specific step in the process, and to help with management of the process. As you complete the tasks listed, date and initial in the spaces provided. The checklist will provide a written record of your progress.

Task	Date Due	Date Completed	Initials
Identify leading risks in the community.			
Develop understanding of groups affected by the leading risks.			
Identify and understand the hazards associated with the common risks.			
Identify and understand the causal factors associated with the hazards.			
Identify population groups at greatest risk in the community.			
Develop clear understanding of overall risk (big picture) in the community.			
Identify strengths and weaknesses in organizations ability to respond to hazards.			
Assess community's overall ability to respond to, and resist, the impact of existing hazards.			
Prioritize the risks according to potential impact on the community. (Cooperative effort with community.)			
Establish acceptable community standard for level of risk to be tolerated.			
Develop risk reduction objectives for the highest priority risks.			
Gain agreement among participants and stakeholders for the risk reduction objectives.			

Matrix 1--Hazard Identification		
List 5 possible hazards.	What is the probability that an event will occur at this hazard?	What is your best estimate of the total population that could be affected seriously by this hazard? Consider peak population if appropriate.
1.	1. Unlikely 2. Possible 3. Likely	_____ Enter a number
2.	1. Unlikely 2. Possible 3. Likely	_____ Enter a number
3.	1. Unlikely 2. Possible 3. Likely	_____ Enter a number
4.	1. Unlikely 2. Possible 3. Likely	_____ Enter a number
5.	1. Unlikely 2. Possible 3. Likely	_____ Enter a number

Matrix 3--Risk Rating							
	Probability of Occurrence			Vulnerability			Risk
List 5 Hazards	Likely (3)	Possible (2)	Unlikely (1)	High (3)	Moderate (2)	Low (1)	Rating (probability x vulnerability)

Matrix 2--Vulnerability Assessment					
	1	2	3	4	5
HAZARDS List hazards.					
Impact Rating					
Danger/Destruction/Personal Harm (High=3; Moderate=2; Low=1)					
Economic (Permanent=3; Temporary=2; Immediate short term=1)					
Environmental (High=3; Moderate=2; Low=1)					
Social (High=3; Moderate=2; Low=1)					
Political Planning Level (Local=1; Regional=2; Federal=3)					
Total Vulnerability Rating (Sum of all factors)					
RANK LOW = 5-8 MODERATE = 9-11 HIGH = 12-15					

